

REMARKS

Claims 4, 5, 9-11, 13, and 14 were pending in the application; however, by this Amendment claims 4, 5, 9-11, and 14, which are directed to a non-elected invention, have been cancelled without prejudice to the filing of a divisional patent application directed thereto. Also, this Amendment revises claim 13 to more particularly point out and distinctly claim the invention. Thus, upon entry of this Amendment claim 13 will be pending.

35 U.S.C. § 103(a) Rejection

Claim 13 presently stands rejected under 35 U.S.C. § 103(a) over Oya (JP 11-278287) in view of Urschel (U.S. Patent No. 1,983,584). Because the proposed combination of Oya and Urschel fails to disclose or suggest all of the limitations of claim 13, it is respectfully submitted that claim 13 patentably distinguishes over the proposed combination of Oya and Urschel.

Specifically, claim 13 as amended recites:

A hollow rack shaft which is formed cylindrically by bending a straight plate having wider and narrower width parts so that two sides of the plate are joined, wherein in a part of a surface of the plate a row of rack teeth is formed along a direction of an axis of the plate, and wherein:

said rack shaft is provided with a first area and second areas on both sides of said first area;

wherein in said first area, the row of rack teeth and a semi-cylindrical part on a reverse side of the row of rack teeth are formed; and

in each of said second areas, a respective complete cylindrical part is formed and at least one of the respective complete cylindrical parts has an outer diameter smaller than an outer diameter of the semi-cylindrical part in said first area. (Emphasis added).

The proposed combination of Oya and Urschel fails to disclose or suggest all of these limitations. With respect to Oya, this reference does not disclose any variations in the diameter of the shaft. Rather, Oya discloses a shaft having what appears to be a same outer diameter for the semi-cylindrical part and the neighboring cylindrical parts. With

respect to Urschel, this reference discloses a shaped metal tube having a complete cylindrical part and a semi-cylindrical part. However, the tube disclosed in Urschel is the opposite of the claimed shaft in terms of the relationship between the outer diameters of the complete cylindrical part and the semi-cylindrical part. For example, as shown in Fig. 11 of Urschel, the tube has a complete cylindrical part indicated at 85 that has a *larger* outer diameter than that of the semi-cylindrical part indicated at 86. This is exactly the opposite of the claimed shaft requiring a complete cylindrical part having a *smaller* outer diameter than that of the semi-cylindrical part. Thus, the proposed combination of Oya and Urschel is silent with respect to a shaft having a complete cylindrical part having a smaller outer diameter than that of a semi-cylindrical part.

In the Office Action, under the heading “*Response to Arguments*” it states that “the test for obviousness is not ... that *the claimed invention must be expressly suggested in any one or all of the references*” citing *In Re Keller*. In response, it is first respectfully submitted that since Oya, Urschel, and the proposed combination thereof are silent with respect to a tube or shaft having a complete cylindrical part having a smaller outer diameter than that of a semi-cylindrical part, there is no evidence that the proposed combination would have provided a suggestion for such a tube or shaft. It is also noted that the Office Action states that “[i]t would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Oya to alter the areas of the rack shaft for the purpose of reducing the mass of the shaft.” However, this source of this motivation is unclear as the combined disclosures of Oya and Urschel is silent with respect to making a shaft having the diameter relationship claimed in claim 13, and is also silent with respect to variations in the outer diameter of a shaft being utilized for reducing the mass of a shaft. For example, in Urschel, the tubes shown having variations in outer diameter also have variations in wall thickness, so there is no inherent relationship between diameter and mass since the mass also depends on the wall thickness. Additionally, it is impossible to alter the complete cylindrical areas of Oya’s rack shaft into that of a smaller diameter, as the seam formed by the joined sides must be broken during the diameter reduction process. Thus, Urschel does not provide any motivation to provide variations in outer diameter in order to reduce the mass of a shaft.

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On the other hand, this motivation appears to be based on the disclosure of the present specification, for example at paragraph 42 thereof. It is respectfully pointed out that the teachings of the present invention cannot be used as motivation for combining prior art references in order to establish a *prima facie* case of obviousness. As stated by the Federal Circuit:

It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."

[*In re Fritch*, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992)].

Furthermore, it is respectfully pointed out that motivation to "alter the areas of the rack shaft for the purpose of reducing the mass of the shaft" represents little more than general guidance and is not at all specific as to the particular form of the claimed invention. It has been held that such motivation merely represents an invitation to explore, which is insufficient for rendering an invention obvious. See *Ex parte Obukowicz*, 27 USPQ 2d, 1063, 1065 (B.P.A.I. 1992).

Accordingly, it is respectfully requested that the rejection of claim 13 under 35 U.S.C. § 103(a) over Oya in view of Urschel patent be reconsidered and withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment does not increase the number of independent claims, does not increase the total number of claims, and does not present any multiple dependency claims. Accordingly, no fee based on the number or type of claims is currently due. However, if a


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fee, other than the issue fee, is due, please charge this fee to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260.

If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any fee required for such Petition for Extension of Time, and any other fee required by this document, other than the issue fee, and not submitted herewith, should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

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